Under the Paperwork reduction Act of 1985 no per	U.S.	Patent and Tr	PTO/SB/21 Approved for use through 09/30/2007. OMB 065 rademark Office; U.S. DEPARTMENT OF COMN ormation unless it displays a valid OMB control n			
Onder the Paperwork Reduction Act of Task and Def	Application Number	10/591,374				
TRANSMITTAL	Filing Date	August 31,	2006			
FORM	First Named Inventor	Mark Frank	klin Davis			
	Art Unit	Art Unit 2615				
(to be used for all correspondence after initial filing)	Examiner Name					
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Fee Attached	Licensing-related Papers		Appeal Communication to Board of Appeals and Interferences  Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)			
	Petition					
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After Final	Provisional Application Power of Attorney, Revocation	on	Proprietary Information			
Affidavits/declaration(s)	Change of Correspondence	Status Letter Other Factoryre(a) (places Identity				
Extension of Time Request	Terminal Disclaimer	Other Enclosure(s) (please Identi below):				
Express Abandonment Request	Request for Refund	PTO-1449 (4 Sheets), copy of cited references (13), Certificate of Mailing a				
Information Disclosure Statement	CD, Number of CD(s)		return receipt postcard			
Information disclosure diatement	Landscape Table on C	D				
	marks					
Document(s)						
Reply to Missing Parts/ Incomplete Application						
Reply to Missing Parts under 37 CFR 1.52 or 1.53						
SIGNATURE	OF APPLICANT, ATTO	RNEY, O	R AGENT			
Firm Name  GALLAGUER & LATHROP	1					
Signature Winas (1.	Lall (					
Printed name Thomas A. Gallagher						
Date May 31, 2007		Reg. No.	24,815			
CERTI	FICATE OF TRANSMISS	SION/MAI	LING			

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

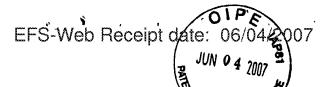
Karen M. Strange

Typed or printed name

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Date

May 31, 2007



## IN THE LINE OF STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Mark Franklin Davis

Serial No.: 10/591,374

Filing Date: August 31, 2006

Title:

Multichannel Audio Coding

Conf. No.

8002

Examiner:

Art Unit: 2615

May 31, 2007 San Francisco, California

Commissioner of Patents P.O. Box 1450 Alexandria, VA 22313-1450

## **INFORMATION DISCLOSURE STATEMENT**

Sir:

Pursuant to the duty of disclosure set forth in 37 CFR § 1.56, Applicant(s) respectfully submit the following information disclosure statement.

The disclosed references are:

US 1,124,580, issued January 12, 1915, Edward H. Amet, filed July 3, 1911

US 1,850,130, issued March 22, 1932, D. K. Gannett, filed October 31, 1928

US 1,855,147, issued April 19, 1932, W. B. Jones, filed January 11, 1929

US 2,114,680, issued April 19, 1938, A. N. Goldsmith, filed December 24, 1934

US 2,819,342, issued January 7, 1958, F. K. Becker, filed December 30, 1954

US 2,860,541, issued November 18, 1958, W. R. Dresser, filed April 27, 1954

US 2,927,963, issued March 8, 1960, Jordan, et al., filed January 4, 1955

US 3,046,337, issued July 24, 1962, W. F. Hornyak, filed August 5, 1957

US 3,067,292, issued December 4, 1962, J. B. Minter 2<sup>nd</sup>, filed February 3, 1958.

US 3,846,719, issued November 5, 1974, Ray Milton Dolby, filed September 13, 1973

Docket: AQLIPEPPERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /G.B./

US 4,308,424, issued December 29, 1981, Robert G. Bice, Jr., filed April 14, 1980 US 4,359,605, issued November 16, 1982, Haramoto, et al., filed November 13, 1980 US 4,799,260, issued January 17, 1989, Mandell, et al., filed February 26, 1986 US 4,922,535, issued May 1, 1990, Ray M. Dolby, filed March 3, 1986 US 4,941,177, issued July 10, 1990, Mandell, et al., filed July 22, 1988 US 5,046,098, issued September 3, 1991, Mandell, et al., filed June 1, 1989 US 5,105,462, issued April 14, 1992, Lowe, et al, filed May 2, 1991 US 5,164,840, issued November 17, 1992, Kawamura, et al., filed August 28, 1989 US 5,172,415, issued December 15, 1992, James W. Fosgate, filed June 8, 1990 US 5,274,740, issued December 28, 1993, Davis, et al., filed June 21, 1991 US5,394,473, issued February 28, 1995, Grant A. Davidson, filed December 11, 1991 US 5,400,433, issued March 21, 1995, Davis, et al., filed December 28, 1993 US 5,428,687, issued June 27, 1995, Willcocks, et al., filed December 14, 1992 US 5,504,819, issued April 2, 1996, James W. Fosgate, filed July 18, 1994 US 5,583,963, issued December 10, 1996, Bruno Lozach, filed January 21, 1994. US 5,621,855, issued April 15, 1997, Veldhuis, et al., filed October 19, 1994 US 5,625,696, issued April 29, 1997, James W. Fosgate, filed April 2, 1996 US 5,633,981, issued May 27, 1997, Mark F. Davis, filed June 7, 1995 US 5,644,640, issued July 1, 1997, James W. Fosgate, filed March 27, 1996 US 5,727,119, issued March 10, 1998, Davidson, et al., filed March 27, 1995 US 5,909,664, issued June 1, 1999, Davis, et al., filed May 23, 1997 US 6,021,386, issued February 1, 2000, Davis, et al., filed March 9, 1999 US 6,807,528, issued October 19, 2004, Truman, et al., filed May 8, 2001 US Re 36,714, reissued May 23, 2000, Brandenburg, et al., reissue filed November 10, 1994 US 2003/0035553, published February 20, 2003, Baumgarte, et al., filed November 7, 2001

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WO 01/41505, published June 7, 2001, Gundry, et al., filed November 29, 2000

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ATSC Standard A52/A: Digital Audio Compression Standard (AC-3), Revision A, Advanced Television Systems Committee, 20 August 2001.

Baumgarte, et al., "Why Binaural Cue Coding is Better Than Intensity Stereo Coding," 2002 May 1-13, Presented at the 112<sup>th</sup> AES Convention, Munich, Germany.

Baumgarte, et al., "Estimation of Auditory Spatial Cues for Binaural Cue Coding," 2002, IEEE, pp II-1801-II-1804.

Cheng, et al., "Introduction to Head-Related Transfer Functions (HRTS'S): Representations of HRTF'S in Time, Frequency, and Space," (invited tutorial). <a href="mailto:coreyc@eecs.umich.edu">coreyc@eecs.umich.edu</a>; <a href="http://www.eecs.umich.edu/~coreyc">http://www.eecs.umich.edu/~coreyc</a>.

Faller, et al., "Binaural Cue Coding Applied to Stereo and Multi-Channel Audio Compression," 2002 May 10-13, presented at the 112<sup>th</sup> AES Convention, Munich, Germany.

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Percival, W. S., "A Compressed-Bandwidth Stereophonic System for Radio Transmission," IEEE Paper No. 3152 E, November 1959.

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Vernon, Steve, "Design and Implementation of AC-3 Coders," reprinted by permission of IEEE, published in IEEE Tr. Consumer Electronics, Vol. 41, No. 3, August 1995.

The filing of this Information Disclosure Statement shall not be construed as a representation that a search has been made (37 CFR §1.97(g)), admission that the information cited is, or is considered to be material to patentability, or that no other material information exits.

The filing of this Information Disclosure Statement shall not be construed as an admission against interest in any manner. Notice of January 9, 1992, 1135 O.G. 13-25, at 25.

Applicant wishes to make of record the documents listed on the accompanying form PTO-1449. Copies of the references are submitted herewith. It is respectfully requested that the Examiner initial the cited references on the form and that it be made of record in the application and that a copy of the initialed form be sent to applicants with the next communication from the Examiner.

Respectfully submitted,

Thomas A. Gallagher

Reg. No. 24,815

601 California St., Suite 1111 San Francisco, CA 94108-2805

Telephone: (415) 989-8080 Facsimile: (415) 989-0910

Enc. Transmittal Form

PTO-1449 (4 Sheets) Cited References (13) Return Receipt Postcard Certificate of Mailing Under 37 CFR 1.8

I certify that this Information Disclosure Statement and any enclosed materials are being deposited with the United States Postal Service on May 31, 2007 with sufficient postage as first class mail in an envelope addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Karen M. Strange

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SHEET 1 OF 4

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FILING DATE GROUP August 31, 2006 2615

*Exam. Initial	Cite No.	DOCUMENT NUMBER Number - Kind Code	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	FILING DATE
/G.B./		US-1,124,580	01/12/1915	Edward H. Amet	07/03/1911
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000000		US-2,114,680	04/19/1938	A.N. Goldsmith	12/24/1934
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00000		US-3,846,719	11/05/1974	Ray Milton Dolby	11/13/1973
000000		US-4,308,424	12/29/1981	Robert G. Bice, Jr.	04/14/1980
/G.B./		US-4,359,605	11/16/1982	Haramoto, et al.	11/13/1980

*Exam.	Cite	DOCUMENT NUMBER	PUBLICATION	NAME OF PATENTEE OR APPLICANT	TRANSLATIO	
Initial	No.	Number - Kind Code	DATE		YES	NO
/G.B./		WO 01/41504	06/07/2001	James W. Fosgate		ļ .
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00000		WO 02/063925	08/15/2001	Mark Franklin Davis		
000000		WO 02/097792	12/05/2002	Brett Graham Crockett		
0000000		WO 02/19768	03/07/2002	Fosgate, et al.		
/G.B./		WO 04/019656	03/04/2004	Mark Franklin Davis		

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			NON-PATI	NT LITERATURE DOCUMENTS		-		
*Exam. Initial	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.						
/G.B./		ATSC Standard A52/A: Digital Audio Compression Standard (AC-3), Revision A, Advanced Television Systems Committee, 20 August 2001.						
/G.B./			Baumgarte, et al., "Why Binaural Cue Coding is Better Than Intensity Stereo Coding," 2002 May 1-13, resented at the 112th AES Convention, Munich, Germany.					
/G.B./		Baumgarte, et al., "Estimat 1801-II-1804.	Baumgarte, et al., "Estimation of Auditory Spatial Cues for Binaural Cue Coding," 2002, IEEE, pp II-801-II-1804.					
				ted Transfer Functions (HRTS'S): Representation	s of HRTF'S			
000000000000000000000000000000000000000		in Time, Frequency, and Sphittp://www.eecs.umich.edu		tutoriai): coreyc@eecs.umich.edu ,	***************************************			
/G.B./		Faller, et al., "Binaural Cue Coding Applied to Stereo and Multi-Channel Audio Compression," 2002 May 10-13, presented at the 112th AES Convention, Munich, Germany.						
EXAMINE	/Greg Borsetti/ (05/06/2008) DATE CONSIDERED 05/06/2008							

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP; draw line through citation if not in conformance and not considered. Include copy of this form with next compunication with applicant CEPT

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SHEET 2 OF 4 DOCKET NT OF COMMERCE Substitute Form PTO-1449 **DOL11505 US** 10/591,374 APPLICANT Mark Franklin Davis INFORMATION DISCLOSURE STATEMENT FILING DATE GROUP August 31, 2006 2615 U.S. PATENT DOCUMENTS \*Exam. DOCUMENT NUMBER PUBLICATION NAME OF PATENTEE OR APPLICANT **FILING DATE** Number - Kind Code DATE Initial No. /G.B./ US-4,799,260 01/17/1989 Mandell, et al. 02/26/1986 US-4,922,535 05/01/1990 Ray M. Dolby 03/03/1986 US-4,941,177 Mandell et al. 07/22/1988 07/10/1990 US-5,046,098 09/03/1991 Mandell et al. 06/01/1989 05/02/1991 US-5,105,462 04/14/1992 Lowe, et al. US-5,164,840 11/17/1992 Kawamura, et al. 08/28/1989 US-5,172,415 12/15/1992 James W. Fosgate 06/08/1990 06/21/1991 US-5,274,740 12/28/1993 Davis, et al. Grant A. Davidson US-5,394,473 02/28/1995 12/11/1991 12/28/1993 US-5,400,433 03/21/1995 Davis, et al. 06/27/1995 12/14/1992 US-5,428,687 Willcocks, et al. /G.B. 07/18/1994 04/02/1996 James W. Fosgate US-5,504,819 FOREIGN PATENT DOCUMENTS NAME OF PATENTEE OR APPLICANT PUBLICATION TRANSLATION \*Exam. Cite DOCUMENT NUMBER DATE YES NO Initial No. Number - Kind Code NON-PATENT LITERATURE DOCUMENTS Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, TRANSLATION journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. YES NO Initial Faller, et al., "Binaural Cue Coding: A Novel and Efficient Representation of Spatial Audio," 2002, /G.B./ IEEE, pp II-1841-II-1844. Faller, et al., "Efficient Representation of Spatial Audio Using Perceptual Parametrization," 21-24 /G.B./ October 2001, IEEE Workshop on Applications of Signal Processing to Audio and Acoustics, pp 199-202 Percival, W. S., "A Compressed-Bandwidth Stereophonic System for Radio Transmission," IEEE Paper /G.B./ No. 3152 E. November 1959. Princen, et al., "Subband/Transform Coding Using Filter Bank Designs on Time Domain Aliasing /G.B./ Cancellation," Proc. Int. Conf. Acoust., Speech, and Signal Proc., May 1987, pp 2161-2164 Schroeder, et al., "Colorless Artificial Reverberation," 1961, IRE Transactions on Audio, Vol. AU-9, pp /G.B./ 209-214 DATE CONSIDERED EXAMINER /Greg Borsetti/ (05/06/2008) 05/06/2008

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SHEET 3 OF 4

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Initial /G.B./	No.	Number - Kind Code US-5,583,963	DATE 12/10/1996	Bruno Loza	ch		01/21/	/1994
10.0.7		US-5,621,855	04/15/1997	Veldhuis, et			10/19/	
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		US-5,909,664	06/01/1999	Davis, et al.			05/23/	
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		US-Re 36,714	05/23/2000	Brandenbur			11/10/	/1994
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	110.	Schroeder, M. R., "Natu			erberation," July 1962, Jour		1	
/G.B./		pp 219-223						
/G.B./		Todd, et al., "AC-3: Flo 26-March 1, presented a			Audio Transmission and Stas Preprint 3796.	torage," 1994 February		
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